CAD Projects

GoPro Charging Handle Design Project
Designed a waterproof battery-powered charging accessory for a GoPro camera. Designed in Autodesk Inventor and 3D printed the shell. Wired the battery inside the handle to the camera, sealed it, and tested it. Rechargeable via USB.

Wind Tunnel Project
Used a wind tunnel and pitot tube to calculate the drag coefficient of various airfoil designs created in SolidWorks and 3D printed, in order to determine efficiency and integration with wave harvesting devices. Detailed findings in technical report and PowerPoint presentation for faculty and peers.

Water Jug Lift Mechanism
Designed a 4R-4Bar lift mechanism using Working Model that could be used to lift a 5-gallon water jug onto a water dispensing unit using a motor. Analyzed the max torque needed to achieve the motion for motor selection.

Oil Pump Jack Design Project
Designed an oil pump jack for specific torque and rpm requirements. This included motor selection, structural analysis, belt, pulley, shaft, bearing, and gearing selection. Designed and performed structural FEA using SolidWorks.